

REMARKS

Claim Rejections

The Examiner has rejected claims 1-3, 9-13, 21-22, 24 and 39 as being anticipated under 35 U.S.C. § 102(b) by McCory (U.S. Patent No. 5,951,599). The Examiner has also rejected claims 1-3, 8-13, 21-22, 24, 28-29 and 39 as being anticipated under 35 U.S.C. § 102(e) by Wulfman et al. (U.S. Patent Pub. No. 2003/0139802). The Examiner has also rejected claims 4-7, 18-19 and 30-34 as being unpatentable under 35 U.S.C. § 103(a) over Wulfman et al. in view of Summers (U.S. Patent 6,080,191). The Examiner has also rejected claims 15-17 and 25-27 as being unpatentable under 35 U.S.C. § 103(a) over Wulfman et al. in view of Boatman et al. (U.S. Patent No. 6,464,720).

Applicant has carefully considered the Examiner's comments. In order to expedite prosecution of Applicant's application, Applicant has cancelled claims 1-13, 15-19, 21-22, 24-34 and 36-39 and has added new claims 40-72 for consideration. Claims 40, 51 and 62 are based on cancelled claim 1 and include all of the limitations previously presented in claim 1. In addition to the limitations of claim 1, claims 40, 51 and 62 include additional limitations not found in the prior art relied upon by the Examiner. The limitations added to claims 40, 51 and 62 are underlined below for the convenience of the Examiner.

Claim 40 now requires "a non-mesh tubular structure formed of one or more frame threads circumferentially wrapped thereabout." Support for this limitation may be found in paragraphs [0029] and [0040] and Figures 4 and 5 of the original specification. None of the prior art of record discloses this limitation in combination with the remaining limitations in claim 40. In particular, McCory discloses a tubular structure that is a "mesh device" that may be made with braided filaments. (See, e.g., col. 2, lines 62-67; col. 3, lines 1-22; col. 4, lines 20-43). Likewise, Wulfman et al. discloses a tubular structure that is an "expandable mesh." These structures are considerably different than the tubular structure claimed by Applicant. As shown in Figure 6 of Wulfman et al., the occlusion device 10 may be implanted adjacent a branched artery to block blood flow into an aneurysm. However, the fluid dynamics into the branched artery through

the disclosed mesh structure may be significantly different than the claimed invention. For example, as shown in Figure 10 of Applicant's specification, blood flows into the branched artery through a non-mesh structure with frame threads that circumferentially wrap about the tubular structure. Accordingly, neither McCorry nor Wulfman et al. disclose all of the limitations of claim 40 as now presented.

Claim 51 now requires "said tubular structure comprising a curved portion formed by one of said frame threads, said curved portion being interleaved between said one or more frame threads." Support for this limitation may be found in paragraphs [0029] and [0040] and Figures 4 and 5 of the original specification. None of the prior art of record discloses this limitation in combination with the remaining limitations of claim 51. As explained above, both McCorry and Wulfman et al. relate to mesh structures. Mesh structures operate in a completely different way than the claimed structures. In a mesh structure, the tubular structure is collapsed for delivery and expanded at the implantation site by deforming the structure and flattening the openings between the structural elements. By contrast, the claimed structure is interleaved and folds into itself when collapsed. As a result, the graft material may fold with the structure in a more controlled manner instead of bunching as is likely with the embodiments disclosed in McCorry and Wulfman et al. Claim 51 is directed to a specific structure where the frame threads have a curved portion that is interleaved between the frame threads. McCorry and Wulfman do not disclose this structure. Accordingly, neither McCorry nor Wulfman et al. disclose all of the limitations of claim 51 as now presented.

Claim 62 now requires that the graft material be "disposed on an outer surface of a portion of the support frame thereby covering and spanning at least a portion of the length" and "wherein said graft material is secured to said support frame by folding said graft material around one of said frame threads thereby creating an area of double thickness and connecting two layers of said graft material to each other." Support for this limitation may be found in paragraphs [0036] and [0039] and Figures 4 and 5 of the original specification. None of the prior art of record discloses this limitation in combination with the remaining limitations of claim 62. In particular, McCorry and Wulfman et al. describe the graft layer as being adhered to, mounted to or affixed to the tubular structure. Neither of these references discloses folding the graft material around

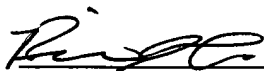
one of the structural elements to create an area of double thickness and connecting the two layers together to secure the graft material to the support frame. Accordingly, neither McCorry nor Wulfman et al. disclose all of the limitations of claim 62 as now presented.

In addition to claims 40, 51 and 62, the prior art of record does not disclose the additional limitations of claims 41-50, 52-61 and 63-72. Each of these claims depends from either claim 40, 51 or 62. Thus, claims 41-50, 52-61 and 63-72 include all of the limitations of the claims they depend from. Because claims 40, 51 and 62 are allowable as presented, all of the claims depending therefrom are also allowable. Thus, any further arguments that could be made at this time would be superfluous and are unnecessary.

Conclusion

In response to the Examiner's comments, Applicant has cancelled claims 1-13, 15-19, 21-22, 24-34 and 36-39. Claims 40-72 have been added. Claims 40, 51 and 62 include all of the limitations of previously presented claim 1 in addition to limitations that better define the claimed invention. None of the prior art of record discloses all of the limitations in the claims as now presented. Thus, Applicant's claims are allowable. Accordingly, Applicant requests reconsideration and allowance of the application.

Respectfully submitted,



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